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FILE COPY**Rocky Flats Citizens Advisory Board****Comments on the Draft Proposed OU 4 Solar Evaporation Ponds
Interim Measure/Interim Remedial Action
Environmental Assessment
Decision Document**

November 3, 1994



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Regulatory Issues:**General Comments**

- 1) The NEPA coverage in this draft proposed document is not adequate in considering the magnitude of the decision being made. The proposal calls for the permanent placement of low level mixed wastes, which in essence means that the site will become a waste repository. Such placement is a major decision that needs to be fully explored through an Environmental Impact Statement.

Policy Issues:**General Comments**

- 1) Greater clarification needs to be made on what exactly this proposal aims to do. Why has the decision been made to treat this activity as if it were the closure of a landfill rather than the cleanup of a polluted area?

Technical Issues:**General Comments**

- 1) The proposed closure activity anticipates a system protective for a thousand year time-span. The document though, does not sufficiently evaluate the impact of geologic processes. In geologic time many changes could occur that would have significant impact on the site and should be evaluated.
- 2) Figures need to be included in the plan that accurately account for the total mass and specific activity of the radionuclides currently present in the soil, the liners, and in the materials scheduled to be placed within the landfill.

Rocky Flats Citizens Advisory Board, Inc.
9035 Wadsworth Parkway, Suite 2250
Westminster, CO 80021
Phone: (303) 420-7888 Fax: (303) 420-7579

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3) Groundwater characterization is not sufficiently complete to allow a sound determination of the sources and amounts that could have an impact on this project. During construction of the French drain system for the 881 Hillside, insufficient knowledge of the groundwater system led to design changes. Similar problems could arise at OU 4 without adequate characterization.

4) The air protection plan for this project is not adequate. The only true protective measure is the use of portable containment structures that will enclose construction activities. Soil wetting and high wind work stoppages do not allow for maximum protection given the likelihood of major wind events and the discovery of isolated pockets containing high levels of contamination.

Specific Comments

(submitted by T.E. DuPont)

1) Description: Quantitative derivation of PRG's appear to be excessively conservative.

Concerns / Impacts

- drives cost/schedule and complexity of design
- creates unnecessary emotional concerns in general public
- sets unnecessary precedence for future projects

Action Desired

- Define future land use life cycle scenarios for Rocky Flats (to be used for all studies at the site).
- Recompute nominal PRG levels and variances that represent land use activities.

2) Description:

- Table IV.10.24 (section 10) does not validate the selection of the "preferred IM/IRA" to "No Action". In fact if the PRG's are lowered the "No Action" solution just becomes even more attractive.
- Table 10.24 (or a companion) should provide a reasonable set of measurands for comparisons rather than words only.

Concerns/Impacts

- Possible de-selection of better alternatives
- Cannot judge relative sensitivity of alternative attributes

Action Desired

- Show/develop some level of quantitative selection criteria for option selection.
- Show how much better/worse the choices are

Additional Comments/Questions Arising from #1 and #2 above: Parametrics of what is required for remediation as a function of various land use planning and the resulting PRG's should be performed. It's possible that by doing a few selected smart things to lower/control the PRG's (active/passive methods) much more simple - safe - enduring solutions could be postulated.

- 3) Description: Life cycle (300-1000 years?) environmental models (air, ground/surface waters, terrestrial, etc) for use in the analytic tools MYGRT, VLEACH, etc., are not in document. Where are they documented?

Concerns/Impacts

- Inadequate life cycle forcing functions lead to questionable/problematic solutions
- Cannot show specification/requirement compliance
- No consistency in trade study comparisons

Action Desired

- Provide descriptions of all life cycle environmental characteristics used in design and for requirement compliance studies.
- Should include nominal, variance and worst case cycles

- 4) Description: The ground water table life cycle is especially not addressed. The subsurface drain is supposed to allay fears of what might happen. Analyses should be available that addresses important aspects of this phenomena.

Concerns/Impacts

- 1000 cycles of ground water rise/fall, ebb/flow creates soil migration, silting, heaving/subsidence stresses, etc. on the cover. Without some engineering analysis, impacts on solution are not quantified.

Action Desired

- Using the models requested in #3, provide an engineering analysis of potential impacts. (Important ones).

- 5) Description: In requirements (section 2), 2.1.4 is redundant(?) and 2.1.5 is design specific rather than top level requirement.

- Is there a requirement tree? Where do you get down to task level requirements?
- Where is the req/spec compliance plan? Where/how is satisfaction shown?

Concerns/Impacts

- Without some sort of req/spec tree, allocation/completeness of task level req's is difficult and prone to gaps.
- Verification/validation of compliance to the req's cannot be shown, traced or planned in a satisfactory manner.

Action Desired:

- Show connection of design req to top functional object.
- For design req, provide compliance plan (hi-level)
 - analysis
 - test
 - inspection
- Provide compliance matrix for selected option and alternatives.

- 6) Description: At design concept level, several analyses seem to be missing

- failure modes and effects
- worst case life cycles

Concerns/Impacts

- Without a high level out at these analyses, basic concepts weaknesses and sense of resiliency will not be identified.
- Plans for mitigation, design elimination, work-arounds, etc., will not be anticipated.
- Alternative trade studies difficult to conclude.

Action Desired:

- Provide some analyses that reflect the breadth, recoverability, hazards of the selected concept.

7) **Description:** For the selected cover, post closure monitoring is baselined. However, development of adequate predictor models is necessary to "terminate" monitoring in 30 years. It is not clear this is a program requirement.

Concerns/Impacts

- After 30 years of data analysis - nothing compared to 1000 - someone must say "go" for 970 more years without monitoring. How does that happen? What is used for crystal ball?

Action Desired:

- Show plan to make go/stop decision if it is a program requirement

8) **Description:** For selected option:

- Investigation of existing remote sensing capabilities could provide useful methods of P.C. monitoring.

- ground penetrated imaging radar (airborne)

- GPS (airborne)

- low frequency (RF) imaging (ground based)

- Could be part of national program

Concerns/Impacts

- Long term monitoring (contingency) may be required.

- If capabilities can be used smartly, some aspects of design may be impacted now, for example, add radar detectable impurities to asphalt.

Action Desired:

- Your discretion

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Additional Questions

1. How have natural disasters, such as earthquakes, been considered in the design of the cap?
2. How have synergistic effects of contaminants been addressed in establishing the screening thresholds, that is, Preliminary Remediation Goals (PRGs) for soil and water?
3. It was mentioned at the October 20, 1994, CAB meeting that placing the solar evaporation pond sludge that has been removed (low-level mixed RCRA waste) under the cap may necessitate an EIS. DOE's response was that this issue would be handled in the Site-Wide EIS (SWEIS). What issues does the CAB (and stakeholders, in general) expect to have addressed in the SWEIS?

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